Space Weather Forecast

Issued on Saturday, 29 January 2022 at 00:24 Local

This forecast provides a four day assessment of space weather events. The probabilities stated below are for reaching or exceeding the given levels. For more information about space weather impacts please see the Met Office Space Weather Scales https://www.metoffice.gov.uk/weather/learn-about/space-weather/uk-scales

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Space Weather Forecast Headline: Slight chance Minor Geomagnetic Storm throughout.

Analysis of Space Weather Activity over past 24 hours

Solar Activity: Solar activity remains Low. There are five numbered sunspot regions on the visible disc. Occasional low level Common-class flares originated from the largest and most complex spot group, located in the northeast quadrant.
No Earth-directed CMEs have been observed.

Solar Wind / Geomagnetic Activity: The solar wind has been at mostly slightly elevated levels. The magnetic field has been relatively weak, with the important north-south direction variable and also weak. Geomagnetic activity has been mostly Quiet with an Active interval to end the day.

Energetic Particles / Solar Radiation: The count rate of energetic particles (high energy protons) was at background levels with no solar radiation storms observed.

Four-Day Space Weather Forecast Summary

Solar Activity: Low solar activity is likely to continue, with a 20% chance of isolated M-class flares, these most likely from the largest northeast spot group.

Solar Wind / Geomagnetic Activity: A couple of weak CMEs may brush Earth on days 2 and 3 (30th and 31st). Between the potential CME arrivals, solar winds are likely to be slightly elevated for much of the period. Geomagnetic activity is expected to be Quiet to Unsettled with Active intervals probable and a slight chance of a Minor Geomagnetic Storm interval, mainly or days 2 and 3 (30th and 31st January).

Energetic Particles / Solar Radiation: The count rate of energetic particles (high energy protons) is forecast to remain at background with no solar radiation storms expected.

Issued by Met Office Space Weather Advisor, Tel: +44 (0) 330 135 4254 Email: moswoc@metoffice.gov.uk

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Geomagnetic Storms:

Geo-Magnetic Storm Probability (Exceedance)	Level	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Minor or Moderate	G1 to G2	No	10	15	15	5
Strong	G3	No	1	1	1	1
Severe	G4	No	1	1	1	1
Extreme	G5	No	1	1	1	1

Radio Blackouts - X Ray Flares:

X Ray Flares Probability	Level	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Active	R1-R2 M Class	No	20	20	20	10
Very Active	R3 to R5 X	No	1	1	1	1

Solar Radiation Storms - (High Energy Protons):

Radiation Storms Probability (Exceedance)	Level (cm^{-2} sr^{-1} s^{-1})	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Active	≥ S1	No	1	1	1	1
Very Active	≥ S3 *	No	1	1	1	1

* S3 ≥ 10 MeV ≥ 1000 pfu and / or ≥ 50 MeV ≥ 10 pfu. (pfu = $cm^{-2}sr^{-1}s^{-1}$)

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